

**ABSTRACT**

According to the present invention, even if an analysis target has a complicated shape, for example, has two or more cutting surfaces, elements can be automatically extracted therefrom without reducing any analysis accuracy. There is included an interference polygon creating step S3 of creating, for each voxel interfering with shape data, an interference polygon inside the shape data using interference surfaces between the shape data and the interior of the voxel. There are further included, after the interference polygon creating step S3, a divided polygon creating step S5 of moving one of the vertexes of the interference polygon which has a predetermined property, to another vertex and creating a divided polygon having as vertexes the vertex that has not been moved and vertexes of the voxel inside the shape data, and an element extracting step S7 of extracting an element of a predetermined shape on the basis of the relationship between a plurality of vertexes of the divided polygon created at the divided polygon creating step S5.